

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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TITLE: TREE SHELTER

Preliminary Amendment: CLAIM AMENDMENTS

1. (Currently amended) A tree shelter(1) comprising:
a biodegradable fibrous mat(2) covered with a degradable resin(5) and adapted to be formed into a roll which can enclose at least ~~the~~ a lower part of a plant.
2. (Currently amended) A tree shelter(1) as claimed in Claim 1, wherein the fibrous mat(2) comprises a woven mat.
3. (Currently amended) A tree shelter(1) as claimed in Claim 1, wherein the fibrous mat(2) is non-woven and comprises a plurality of layers of ~~fibres~~ fibers.
4. (Currently amended) A tree shelter(1) as claimed in Claim 3, wherein the degradable resin(5) comprises an exterior coating over ~~each of the~~ side surfaces of the fibrous mat(2).
5. (Currently amended) A tree shelter(1) as claimed in Claim 4, wherein ~~the structure of the~~ fibrous mat(2) is further comprised of impregnated with a second degradable resin(4) impregnated therein, said second degradable resin which degrades being degradable at a different rate to that of the first degradable resin(5) under the same environmental conditions.
6. (Currently amended) A tree shelter(1) as claimed in Claim 5, wherein the second resin(4) encapsulates ~~the fibres~~ fibers of the mat(2).

7. (Currently amended) A tree shelter(1) as claimed in Claim 5 ~~or Claim 6~~, wherein the rate of degradation of the first resin(5) is longer than the rate of degradation of the second resin(4).

8. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 5 to 7~~ Claim 5, wherein the first and second resins(4,5) are both biodegradable.

9. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 3 to 8~~ Claim 3, wherein the layers of ~~fibres in the mat (2)~~ fibers are cross- linked.

10. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 1 to 9~~ Claim 1, wherein the mat (2) ~~is substantially made from~~ is comprised of at least one of or a mixture of flax fibres fibers, hemp, mineralized straw and treated grass waste.

11. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 1 to 10~~ Claim 1, ~~wherein the shelter (1) comprises~~ further comprising: a laminate structure made from two outer sheets of the first degradable resin(5) which are bonded to and enclose the fibrous mat(2).

12. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 1 to 11~~ Claim 1, wherein at least one of the degradable resins(4,5) substantially comprises polyvinyl alcohol.

13. (Currently amended) A tree shelter(1) as claimed in Claim 12, wherein said at least one resin(4,5) is a mixture comprising between 20% and 95% polyvinyl alcohol, up to 70% calcium carbonate and between 5% and 30% propanetriol.

14. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 1 to 11~~ Claim 1, wherein at least one of the degradable resins(4,5) ~~substantially~~ comprises a copolyester resin made from poly (tetramethylene adipate-co-terephthalate).

15. (Currently amended) A tree shelter(1) as claimed in ~~any of Claims 1 to 14~~ Claim 1, wherein at least one of the degradable resins(5) ~~substantially~~ comprises a cashew nut shell resin.

16. (Currently amended) A tree shelter-(1) as claimed in ~~any of Claims 5 to 8~~ Claim 5, wherein the first degradable resin-(5) comprising an exterior coating over the side surfaces of the fibrous mat (2) ~~substantially comprises~~ is comprised of a cashew nut shell resin, and the second degradable resin (4) ~~impregnating the structure of the fibrous mat (2) substantially comprises either~~ is comprised of polyvinyl alcohol or poly (tetramethylene adipate-co-terephthalate).

17. (Currently amended) A tree shelter-(1) as claimed in ~~any of Claims 1 to 16~~, Claim 1, further comprising at least one biodegradable stake-(9) ~~made from the same fibres~~ comprised of fibers same as the fibrous mat-(2) and a degradable resin.

18. (Currently amended) A tree shelter-(1) as claimed in ~~any of Claims 1 to 17~~, Claim 1, further comprising a stake (9) which is passed through slits-(10) provided in the fibrous mat to retain the shelter-(1) in a rolled state when in use.

19. (Currently amended) A tree shelter-(1) as claimed in ~~any of Claims 1 to 18~~ Claim 1, wherein the fibrous mat (2) is impregnated with a slow- release fertilizer and/or a weed suppressing preparation.

20. (Currently amended) The use of a tree shelter-(1) as claimed in ~~any of Claims 1 to 19~~ Claim 1.

21. (Currently amended) A method of making a tree shelter-(1) comprising the steps of:
manufacturing a fibrous mat-(2) from biodegradable ~~fibres~~ fibers;
covering the sides of the mat-(2) with a degradable resin-(5); and
cutting the resin-covered mat (2) into a panel (6) which is adapted to be formed into a self-supporting roll that can enclose at least the lower part of a plant.

22. (Currently amended) A method as claimed in Claim 21, wherein the step of manufacturing the fibrous mat (2) is manufactured by comprises:

carding biodegradable ~~fibres~~ fibers into a loose layer;

stacking a plurality of the carded fibre layers over one another ; and

needle-punching the stacked layers to cross-link them to form the mat(2).

23. (Currently amended) A method as claimed in Claim 21 ~~or Claim 22~~, further comprising the ~~additional~~ steps of:

mixing a second degradable resin-(4) in powdered or granular form with the biodegradable fibres-(3) prior to manufacture of the mat and

~~of~~ curing the second resin-(4) by heating the mat-(2) after manufacture and prior to covering by the first degradable resin-(5).

24. (Currently amended) A method as claimed in Claim 23, wherein the first and second resins-(4,5) are both biodegradable and the rate of degradation of the first resin-(5) is longer than the rate of degradation of the second resin-(4).

25. (Currently amended) A method as claimed in Claim 21, wherein the fibrous mat-(2) comprises a woven mat made from biodegradable yarn.

26. (Currently amended) A method as claimed in ~~any of Claims 21 to 25~~ Claim 21, wherein further comprising the step of:

impregnating, prior to covering the sides of the mat (2) with the first resin-(5), the mat (2) ~~is impregnated~~ with a slow- release fertilizer and/or a weed suppressing preparation.

27. (Currently amended) A method as claimed in ~~any of Claims 21 to 26~~, wherein Claim 21, further comprising the steps of:

covering the sides of the mat (2) ~~are covered~~ with the degradable first resin (5) by laying pre-formed sheets of the resin (5) over the opposing sides of the mat (2) and laminating the resin sheets (5) and the mat (2) together by the application of heat and pressure.

28. (Currently amended) A method as claimed in ~~any of Claims 21 to 26, wherein the first resin (5) is~~ Claim 21, further comprising:

extruding the first resin in a sheet form directly over each side of the mat (2); and ~~then-cured~~ curing the first resin.

29. (Currently amended) A method as claimed in ~~any of Claims 21 to 26, wherein the first resin (5) is rolled or brushed~~ Claim 21, further comprising:

rolling or brushing the first resin in a liquid form directly over each side of the mat (2); and ~~then-cured~~ curing the first resin.

30. (Currently amended) A method as claimed in ~~any of Claims 21 to 29;~~ Claim 21, further comprising the further step of:

cutting the resin-covered mat (2) into a substantially rectangular panel (6) along one edge of which is formed at least one projecting tab (7) that can be inserted into a slit (8) cut close to an opposing edge of the panel to enable the rectangular panel (6) to be formed into a self-supporting roll.

31. (Currently amended) A method as claimed in ~~any of Claims 21 to 30;~~ Claim 21, further comprising the further step of: securing at least one stake (7) to the panel (4).

32. (Currently amended) A method as claimed in ~~any of Claims 21 to 29~~, Claim 21, further comprising ~~the further step of~~:

cutting the resin-covered mat ~~(2)~~ into a substantially rectangular panel ~~(6)~~ along two opposing edges of which a series of slits ~~(10)~~ are cut and through which a stake ~~(9)~~ can be inserted after the panel ~~(6)~~ has been formed into a roll in order to retain the shelter ~~(1)~~ in a rolled state.